

Cannons Engineering-Bridgewater Superfund Site Bridgewater, Massachusetts

Background

The six-acre Cannons Engineering-Bridgewater Superfund Site (Site) is located in an industrial park in Bridgewater, Massachusetts. In 1974, the Cannon Engineering Corporation began operating the Site as a hazardous waste storage and incineration facility. The facility applied to the Commonwealth of Massachusetts (State) for a hazardous waste management permit, which was granted in 1979 for storage, but not incineration, activities. The State revoked



<u>Quick Facts</u>	
Location:	42, 50 and 52 First Street
Acreage:	Six acres
Parcels:	Three
Current Uses:	Commercial
Ownership:	Private and public
Zoning:	Industrial ("I-A")
Cleanup Status:	Cleanup Construction activities complete. Long-term groundwater monitoring
Surrounding Land Uses:	Commercial and industrial

the permit the following year, alleging waste mishandling and reporting violations. The facility was later placed in receivership when its owners were found guilty of illegal storage and disposal. To address immediate threats at the Site, the State in 1982 removed and sent to an off-site incinerator approximately 155,000 gallons of sludge and liquid wastes, and 700 drums of containerized waste.

The Site was listed on the federal National Priority List (NPL) in September 1983. EPA subsequently conducted a Remedial Investigation/Feasibility Study (RI/FS) and various other studies to determine the extent of contamination, assess impacts to human health and the environment, and evaluate cleanup options. EPA selected a final cleanup plan for the Site in 1988 that required, among other things, source control measures to address the

remaining soil and sediment contamination, establishment of institutional controls, and monitoring of groundwater contamination (See the Environmental Summary section for additional details).

All soil and sediment source control activities have been completed for the Site and groundwater monitoring is on-going. In addition, institutional controls are in place to ensure that current and future uses do not compromise the protectiveness of the cleanup. As required by the Superfund statute, EPA will conduct a formal review of the Site every five years to evaluate the performance and effectiveness of the cleanup actions taken.

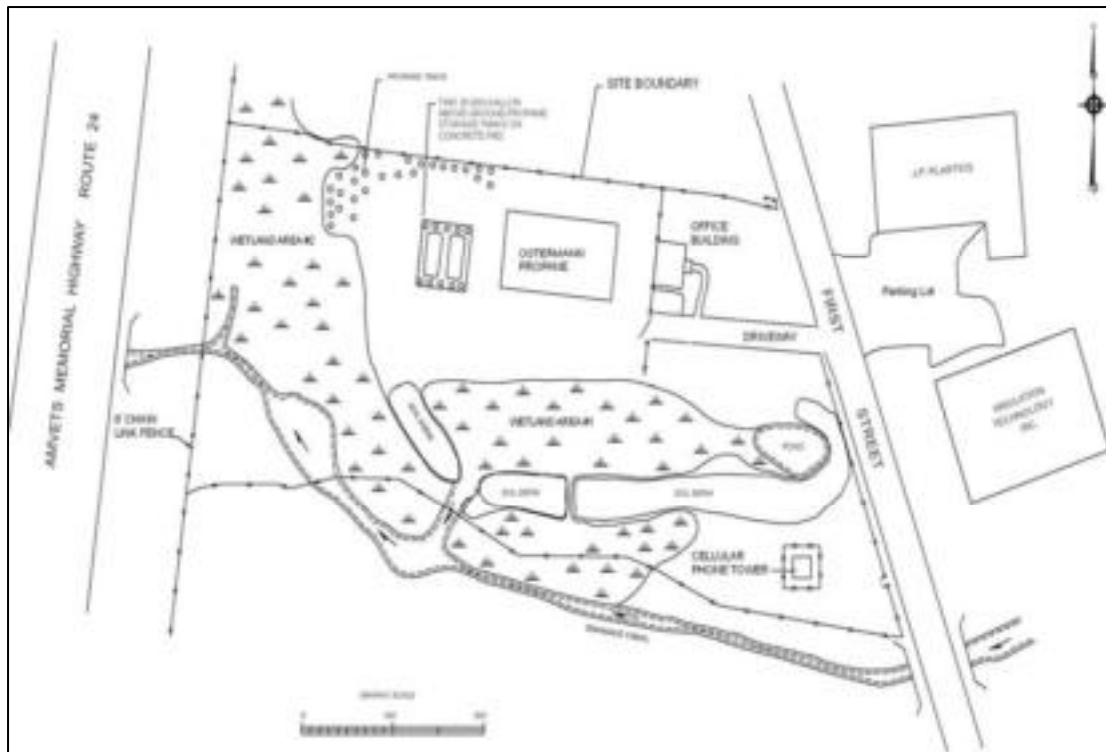


Exhibit 1 - Site Map

Reuse Status

The Site consists of three parcels, identified on the Bridgewater Tax Assessor's Map #71 as: Parcel 75 (Lot 4A, 42 First Street), Parcel 53 (Lot 4, 50 First Street), and Parcel 52 (Lot 3, 32 First Street).

Parcel 75 (Lot 4A) and Parcel 53 (Lot 4)

The town of Bridgewater acquired Parcel 53 through a tax foreclosure in 1985. This parcel was sub-divided into Parcel 75 (Lot 4A) and Parcel 53 (Lot 4) in August 1996.

In November 1996, Osterman Propane, Inc. (Osterman) relocated its propane storage and distribution operation to Lot 4A and Lot 4 after the Massachusetts Bay Transportation Authority (MBTA) took Osterman's downtown Bridgewater property by eminent domain. This occurred in order to facilitate the construction of the Old Colony Commuter Rail Project. To reduce interruptions to Osterman's business operations and also accommodate the MBTA's construction schedule, Osterman was allowed to move to its new location several months prior to the actual transfer of title. Ownership of Lot 4A was transferred to Osterman in January 1997 in a three-way transaction involving the Town of Bridgewater and the MBTA. Osterman leases portions of Lot 4 from the Town to store equipment.

Osterman's current operations consist of a single-story office building, a warehouse, three above-ground propane storage tanks, and a storage area for small propane tanks. In

addition to its storage and distribution operations, Osterman also sells gas appliances and related equipment.

Because Osterman was relocating to parcels that are part of a Superfund site, it sought and obtained from EPA an “Agreement and Covenant Not to Sue” (Agreement) to limit its Superfund liability for existing contamination at the Site. The MBTA was also a party to this Agreement since it entered into the chain of title for Lot 4A when it acquired the property and then transferred ownership to Osterman. The Agreement was signed by EPA, Osterman and the MBTA in January 1997. The Agreement provides assurances that the EPA will not sue Osterman and the MBTA for the then-existing contamination providing these parties comply with the terms of the Agreement. It also includes provisions concerning the transfer of these rights, benefits and obligations to future owners, lessees and sub-lessees.



Osterman Propane from First Street Entrance

Amendments to the Superfund law made effective in 2002 now protect certain purchasers of Superfund sites (i.e., Bonafide Prospective Purchasers) from Superfund liability.

Parcel 52 (Lot 3A)

Lot 3A was purchased by Z&P, LLC. in 1997. The property was leased to Omnipoint Communications Enterprises, Inc. in the spring of 1998, who then installed a telecommunications relay tower. There have been various transactions involving the property since that time. The current owner of Lot 3A is Unison Site Management (Unison), having acquired it in November 2003. American Tower, Inc. purchased the tower in 2002 and has a lease agreement with Unison for the use of the land.

Site Description

The Site is bordered by commercial/industrial operations to the north and east, wetlands and a drainage canal to the south, and additional wetlands and Route 24 to the west. The wetlands are part of the Hockomock Swamp, an extensive wetlands system that the State has designated as an Area of Critical Environmental Concern. The topography is mostly flat with an upland area in the northeast and north-central portions. As described earlier, the upland areas are being utilized for the propane storage and distribution operations and the telecommunications tower. The remainder of the Site is protected wetlands.

Access to the Site is by way of First Street which links to Route 24. The area around the Site, and west of Route 24, are zoned “industrial (I-A).” The Site relies on a private septic system. Municipal water is supplied to the industrial park.

According to Federal Emergency Management Agency reference maps, the upland areas of the Site are not located in a flood hazard zone.

Environmental Summary

As the result of past Site operations, extensive contamination to the soil, surface water, sediment, and groundwater occurred. Soil and sediment were found to contain high concentrations of volatile organic compounds (VOCs) and heavy metals, as well as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxin, and pesticides. Principal contaminants in the groundwater beneath the Site were VOCs and heavy metals. Surface water contained heavy metals, including iron, selenium, lead, manganese and silver.

In 1982, the State removed 700 drums and 155,000 gallons of bulk hazardous waste that were abandoned at the Site after Cannon Engineering Corporation ceased operations in 1980. The Site was placed on the NPL on September 8, 1983. Following comprehensive environmental studies, EPA issued a Record of Decision (ROD) in March 1988 that selected a final cleanup plan comprising measures to address the source of contaminants (source control) and the migration of contaminants in groundwater (migration control).

<u>Key Events</u>	
1974-1980	Cannons Engineering Corporation operates a hazardous waste facility.
1979	State issues hazardous waste management permit
1980	State revokes permit. Facility ceases operations.
1982	State removes abandoned drums and bulk waste
1983	Site placed on NPL
1985	Town acquires Lot 4 (Lot 4 is subdivided in 1996)
1987	EPA completes Remedial Investigation/Feasibility Study
March 1988	EPA selects final cleanup plan
1988-1990	Responsible parties conduct Site cleanup
1991	Deed restrictions recorded for Lot 4 and Lot 3A
1995	EPA completes first Five-Year Review
1997	Osterman acquires Lot 4A
1998	Telecommunications tower installed
2000	EPA completes second Five-Year Review
September 2005	EPA completes third Five-Year Review

Key elements of the source control measures consisted of on-site thermal aeration of contaminated soil, off-site incineration of PCB-containing soil, decontamination and removal of buildings and structures, and restoration of wetlands disturbed during cleanup. Future exposure to remaining contamination was further prevented through institutional controls that included fencing the area to restrict unauthorized access and deed restrictions on the use of the land and groundwater.

The migration control measures included limits on the use of groundwater at the Site through deed restrictions, installation of additional monitoring wells, and implementation of a long-term groundwater monitoring program. Through a process of natural attenuation, the groundwater is expected to achieve drinking water standards over a period of approximately 20 years from the time that cleanup activities on the source areas were completed. Approximately 15 years have since elapsed.

In 1988 and again in 1989-1990, the parties potentially responsible for Site contamination (such as parties that sent their waste to the Site for disposal or treatment) conducted cleanup of the Site under EPA and State oversight. This included:

- off-site incineration of 400 tons of PCB-contaminated soil;
- treatment of 11,300 tons of soils containing volatile organic compounds;
- off-site recycling of 1,200 tons of steel and 1,300 tons of concrete;
- shipment of 360 cubic yards of hazardous debris to a federally-approved disposal facility; and
- disposal of 480 cubic yards of non-hazardous debris at a demolition materials landfill.

These cleanup activities were completed in 1991. Long-term ground water monitoring is also being conducted under the oversight of EPA and the State. Chain-link fencing continues to limit access to most of the Site, except for the front portion of Lot 4A. After the property was developed by Osterman in 1996, the section of fence along First Street was removed and relocated so that it now runs along the rear of the Osterman office building.



Site at Start of Cleanup

Based on the most recent review of the monitoring data, the concentrations of VOCs in the groundwater appear to be decreasing. This data also indicates that groundwater leaving the Site does not exceed Maximum Contaminant Levels (i.e., a federal drinking water standard) for the contaminants of concern.

On September 26, 1991, deed restrictions that run with the land were recorded in the Plymouth County Registry of Deeds on Lot 4 (Book 10498, page 281) and Lot 3 (Book 10498, page 291). As already noted, The Town later subdivided Parcel 53 (Lot 4) into Parcel 75 (Lot 4A) and Parcel 53 (Lot 4). The restrictions on these three lots (i.e., Lot 4, Lot 4A, and Lot 3A) include: prohibitions on any groundwater use; prohibitions on excavation below the depth of the groundwater table without the prior approval of EPA and the Massachusetts Department of Environmental Protection; and limits on the future use of the property to specific commercial, industrial and, for Lot 4 only, municipal uses.

In October 1997, the list of allowable uses for Lot 4A was expanded to add other uses not previously specified (See Plymouth County Registry of Deeds; Book 15550, page 108).

EPA found that a violation of the deed restrictions on Lot 3 occurred when excavations were made below the water table during the construction of the telecommunications tower in 1998.

For Additional Information

EPA Project Manager

Derrick Golden

(617) 918-1448

golden.derrick@epa.gov

EPA Community Involvement Coordinator

Stacy Greendlinger

(617) 918-1403

geendlinger.stacy@epa.gov

EPA Web Site: <http://www.epa.gov/region1/superfund/index2.htm>